

IN THE CLAIMS

Please newly add claims 47 through 53 as follows:

1 Claims 1-33. (Canceled)

1 34.(Withdrawn) A method of manufacturing a bubble-jet type ink jet printhead, comprising:

2 depositing, patterning, and etching a resistive material on a silicon substrate;

3 depositing, patterning, and etching an individual signal line over a portion of said resistive

4 material;

5 depositing a first electrically insulating layer over said silicon substrate;

6 etching a hole in said first electrically insulating layer exposing a portion of said resistive
7 material absent of said individual signal line;

8 depositing, patterning, and etching a common signal line, said common signal line being in
9 electrical contact with said resistive material via said hole in said first electrically insulating layer;

10 depositing a second electrically insulating layer over said silicon substrate;

11 etching through a portion of said first and second insulating layers to expose a portion of said
12 individual signal line in a region absent of said resistive material;

13 depositing, patterning, and etching a film to form a plurality of barrier walls, a first of said
14 plurality of barrier walls being on top of a substantial portion of said individual signal line, and a
15 second of said plurality of barrier walls being parallel to said first of said plurality of barrier walls,
16 said second of said plurality of barrier walls being on an opposite side of said hole in said first
17 insulating layer than said first of said plurality of barrier walls; and

18 attaching a nozzle plate to a top portion of said plurality of barrier walls, said nozzle plate
19 being perforated by a plurality of nozzle holes, one of said plurality of nozzle holes being directly
20 above said hole in said first insulating layer.

1 35. (Withdrawn) The method of claim 34, said resistive material is patterned to be “P”
2 shaped.

1 36.(Withdrawn) The method of claim 35, said individual line covers a straight portion of said
2 “P” shaped resistive layer.

1 37. (Withdrawn) The method of claim 36, said hole in said first insulating layer is located
2 over a center of a curved portion of said “P” shaped resistive layer.

1 38. (Withdrawn) The method of claim 37, one unit heater is located between one side of said
2 center of said curved portion of said resistive layer and said straight portion of said resistive layer
3 and another unit heater is located between another side of said center of said curved portion of said
4 resistive layer and said straight portion.

1 39. (Previously Presented) A method of manufacturing a bubble-jet type ink jet printhead,
2 comprising:
3 forming a plurality of resistive heater elements comprised of patterned resistive material on
4 a substrate;

5 forming a patterned electrode layer on the substrate, the patterned electrode layer being
6 electrically connected to the resistive heater elements;

7 forming barrier walls over the substrate, the barrier walls separating pairs of patterned
8 resistive heater elements from each other; and

9 attaching a nozzle plate to a top of the plurality of barrier walls, the nozzle plate being
10 perforated by a plurality of nozzle holes, each nozzle hole being disposed above a portion of the
11 substrate between a pair of patterned resistive heater elements, each nozzle hole also being disposed
12 between a pair of adjacent barrier walls.

1 40. (Previously Presented) The method of claim 39, further comprising forming an insulating
2 layer over the substrate, over the resistive heater elements and over the patterned electrode layer, the
3 plurality of barrier walls being formed on the insulating layer.

1 41. (Previously Presented) The method of claim 39, the resistive heater elements being
2 formed in pairs, wherein barrier walls serve to separate one pair of resistive heating elements from
3 another adjacent pair of resistive heater elements.

1 42. (Previously Presented) The method of claim 39, said electrode layer is deposited so that
2 each pair of resistive heaters are electrically connected in series.

1 43. (Previously Presented) A method of manufacturing a bubble-jet type ink jet printhead,
2 comprising:

3 forming a plurality of resistive heater elements comprised of patterned resistive material on
4 a substrate;

5 forming a patterned first electrode layer on the substrate, the patterned first electrode layer
6 being electrically connected to the resistive heater elements;

7 forming a first insulating layer over the substrate, the plurality of resistive heater elements
8 and the patterned first electrode layer;

9 etching a hole perforating the first insulating layer to expose a portion of each resistive heater
10 element;

11 forming a second electrode layer over the first insulating layer, said second electrode layer
12 being formed in said hole to form electrical contact to each resistive heater element;

13 forming barrier walls over the substrate, the barrier walls separating pairs of patterned
14 resistive heater elements from each other; and

15 attaching a nozzle plate to a top of the plurality of barrier walls, the nozzle plate being
16 perforated by a plurality of nozzle holes.

1 44. (Previously Presented) The method of claim 43, further comprising forming a second
2 insulating layer over the first insulating layer and over the second electrode layer, wherein the barrier
3 walls are formed on the second insulating layer.

1 45. (Previously Presented) The method of claim 43, said hole being formed over a portion
2 of a resistive heater that is not covered by the first electrode layer.

1 46. (Previously Presented) The method of claim 44, further comprising etching back a
2 portion of the second insulating layer to expose a portion of the first electrode layer.

1 47. (New) The method of claim 39, the barrier walls being adapted to group together said
2 plurality of resistive heater elements in pairs.

1 48. (New) The method of claim 39, ones of resistive heater elements within one pair of
2 resistive heater elements not being separated from each other by the barrier walls.

1 49. (New) The method of claim 39, wherein pairs of the plurality of resistive heater elements
2 are dedicated solely to corresponding ones of said plurality of nozzle holes.

1 50. (New) The method of claim 39, wherein there is a two to one correspondence between
2 the resistive heater elements and the nozzle holes.

1 51. (New) The method of claim 39, each of said barrier walls separating one pair of said
2 resistive heating elements from other adjoining pairs of said resistive heater elements while
3 separating individual ones of said nozzle holes from adjoining others of said nozzle holes.

1 52. (New) The method of claim 51, wherein ones of each pair of resistive heater elements
2 are not separated from each other by said barrier walls.

1 53. (New) The method of claim 39, each of said barrier walls are rectangular in shape and
2 having rectangular cross sections.